

WHAT IS CLAIMED IS:

1. A printing apparatus for introducing a printing medium from a first printing medium holding region and discharging a printing medium after being printed to a second printing medium holding region disposed above the first printing medium holding region as seen from an apparatus body at an operating position, comprising

paper-feeding means for conveying the printing medium from the first printing medium holding region,

reversal means for reversing the conveying direction of the printing medium conveyed by the paper-feeding means generally in the reverse direction,

deflection means for deflecting the conveying direction of the printing medium reversed by the reversal means upward generally in the vertical direction at the operating position,

means for holding printing means to perform a printing on the printing medium of which the conveying direction is deflected generally upwardly in the vertical direction, and

paper-discharging means for discharging the printing medium on which the record is printed by the printing means to the second printing medium holding region.

2. A printing apparatus for introducing a printing medium from a first printing medium holding region and discharging a printing medium after being printed to a second printing medium holding region
5 disposed below the first printing medium holding region as seen from an apparatus body at an operating position, comprising

paper-feeding means for conveying the printing medium from the first printing medium holding region,

10 deflection means for deflecting the conveying direction of the printing medium conveyed by the paper-feeding means downward generally in the vertical direction at the operating position,

means for holding printing means to perform a
15 printing on the printing medium of which the conveying direction is deflected generally downwardly in the vertical direction,

reversal means for reversing the conveying direction of the printing medium on which the record
20 has been printed to the direction toward a position at which the second printing medium holding region is located after being drawn generally in the direction opposite to the position at which the second printing medium holding region is located, and

25 paper-discharging means for discharging the printing medium which direction has been deflected to the position at which the second printing medium

holding region is located, into the second printing medium holding region.

3. A printing apparatus as claimed in claim 1,
5 wherein the printing means is held within a minimum frame encircling the reversal means, the deflection means and the paper-discharging means.

4. A printing apparatus as claimed in claim 1,
10 wherein all the constituent members except for the first printing medium holding region and the second printing medium holding region are disposed within the interior of an outer case member of a generally parallelepiped-shape, and the first printing medium
15 holding region and the second printing medium holding region are provided on the same side of the outer case member.

5. A printing apparatus as claimed in claim 4,
20 wherein a length of a shorter side of the rectangular installation plane of the outer case member is shorter than a height of the outer case member.

6. A printing apparatus as claimed in claim 5,
25 wherein the length of the shorter side of the rectangular installation plane of the outer case member is 100 mm or less, and the height of the outer

case member is 400 mm or less.

7. A printing apparatus as claimed in claim 1,
wherein the printing means is held generally above the
5 reversal means in the vertical direction at the
operating position, and in a space between the
printing means and the reversal means, the conveying
path for the printing medium exists.

10 8. A printing apparatus as claimed in claim 1,
wherein the reversal means is a reversal roller
rotating about an axis thereof while being in tight
contact on a surface thereof with the printing medium,
whereby the printing medium is conveyed while being
15 wrapped around a surface of the reversal roller at 90
degrees or more.

9. A printing apparatus as claimed in claim 1,
wherein either one of the first printing medium
20 holding region or the second printing medium holding
region disposed at a lower position when the printing
apparatus is used is mounted to the printing apparatus
at a larger angle relative to the horizontal plane.

25 10. A printing apparatus as claimed in claim 1,
wherein a stack of the printing media in the first
printing medium holding region is held at a vertical

position by a flat presser member when the printing apparatus is used.

11. A printing apparatus as claimed in claim 1,
5 wherein the paper-discharging means discharges the printing medium above the lower end of the second printing medium holding region when the printing apparatus is used.

10 12. A printing apparatus as claimed in claim 1, wherein the printing means is a printing head for printing on the printing medium while moving in the horizontal direction during the use.

15 13. A printing apparatus as claimed in claim 1, wherein the printing means is a printing head capable of ejecting ink to the printing medium.

14. An image-forming apparatus for printing on a
20 printing medium by using an ink jet printing head, comprising

a paper-feeding tray disposed on a first side of
a body of the image-forming apparatus while stacking
the printing media therein at a slanted position so
25 that a portion of the tray closer to the apparatus
body is relatively lower,

a pickup roller for feeding the printing medium

stacked in the paper-feeding tray.

a reversal path for reversing the printing medium fed by the pickup roller by guiding the printing medium closer to a second side opposite to the first side, and then guiding closer to the first side, ,

a conveying path for guiding the printing medium guided along the reversal path generally upwardly in the vicinity to the first side,

holding means for holding the ink jet printing head above the reversal path so that the printing operation is carried out on a surface of the printing medium opposite to another surface opposite to the first side,

a paper-discharging tray disposed above the paper-feeding tray on the first side, and capable of stacking the printing media, and

a discharging roller for discharging the printing medium on which the printing has been done by the ink jet printing head to the paper-discharging tray.

20

15. An image-forming apparatus as claimed in claim 14, wherein an ink tank disposed above or below the ink jet printing head, for storing ink therein to be supplied to the ink jet printing head, is held by the ink jet printing head or the holding means.

16. An image-forming apparatus as claimed in

claim 14, wherein an openable member is provided on the second side to be accessible to the ink jet printing head.